

FORM THREE WORK

10.0.0 CLASSIFICATION II

10.1.0 Specific Objectives

By the end of the topic, the learner should be able to:

- a) State briefly the general principles of classification of living organisms
- b) State general characteristics of each of the five kingdoms
- c) State the main characteristics of arthropoda, chordata and major divisions of plantae
- d) Name classes of spermatophyta
- e) Describe the main characteristics of classes of phyla arthropoda and chordata
- f) Use observable external features to construct simple dichotomous keys of plants and animals
- g) Use already constructed dichotomous keys to identify organisms.

11.0.0 ECOLOGY (55 LESSONS)

11.1.0 Specific Objectives

By the end of the topic, the learner should be able to:

- a) Define the terms ecology, habitat, biomass, ecosystem and carrying capacity
- b) Identify the physical (abiotic) and biological (biotic) factors in a given ecosystem
- c) Describe the inter relationships of organisms in the ecosystem
- d) Differentiate between saprophytism, parasitism and symbiosis
- e) Explain the importance of fungi and bacteria as decomposers
- f) Relate the mode of transmission to prevention/control of named parasites
- g) Describe the adaptive characteristics of named parasites to hosts
- h) Explain the importance of symbiotic bacteria in leguminous plants

- i) Describe the nitrogen cycle
- j) Explain the flow of energy in the ecosystem

12.0.0 REPRODUCTION IN PLANTS AND ANIMALS

12.1.0 Specific Objectives

By the end of the topic, the learner should be able to:

- a) Describe location and appearance of chromosomes and chromosome movement during mitosis and meiosis
- b) Differentiate between mitosis and meiosis stating their significance in reproduction
- c) Describe and state the importance of asexual reproduction, binary fission, spore formation and budding
- d) Compare adaptations of wind and insect pollinated flowers
- e) Describe the process of fertilization in flowering plants
- f) Describe and explain how different fruits and seeds are formed and dispersed
- g) Differentiate between internal and external fertilization as exhibited by amphibians and mammals (humans)
- h) Relate structure of the human reproductive system to
- i) Describe the role of hormones in human reproduction
- j) Identify the symptoms and explain the method of transmission and prevention of sexually transmitted infections (S.T.Is)
- k) Explain the advantages and disadvantages of sexual and asexual reproduction

13.0.0 GROWTH AND DEVELOPMENT

13.1.0 Specific Objectives

By the end of the topic, the learner should be able to:

- a) Differentiate growth from development
- b) Analyse experimental data on growth rates
- c) Identify parts of a named seed and factors affecting viability and dormancy in seeds
- d) Investigate conditions necessary for germination and distinguish the types of germination
- e) Measure one aspect of growth in a given seedling
- f) Determine the region of growth in seedlings
- g) Explain apical dominance
- h) Distinguish between complete and incomplete metamorphosis in insects
- i) Explain the role of hormones in regulating growth and development.